

541,387

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/060862 A2(51) International Patent Classification⁷: **C07D**FIN-70780 Kuopio (FI). **SAARINEN, Taija** [FI/FI]; Hattalankatu 36 A 2, FIN-70110 Kuopio (FI). **JÄRVINEN, Tomi** [FI/FI]; Sompatie 3 I 6, FIN-70200 Kuopio (FI).(21) International Application Number:
PCT/FI2004/000001(74) Agent: **ORION CORPORATION**; Orion Pharma, Legal Affairs and Intellectual Property Rights, P.O. Box 65, Fin-02101 Espoo (FI).

(22) International Filing Date: 2 January 2004 (02.01.2004)

(25) Filing Language: English

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
20030014 3 January 2003 (03.01.2003) FI(71) Applicant (for all designated States except US): **ORION CORPORATION** [FI/FI]; Orionintie 1, FIN-02200 Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GYNTHER, Jukka** [FI/FI]; Juho Rissasenkatu 17, FIN-70500 Kuopio (FI). **WALLÉN, Erik** [FI/FI]; Vuorikatu 4 A 16, FIN-70100 (FI). **JARHO, Elina** [FI/FI]; Hiihtäjätie 15 G 46, FIN-70200 (FI). **MÄNNISTÖ, Pekka** [FI/FI]; Abrahaminkatu 9 B 37, FIN-00180 Helsinki (FI). **FORSBERG, Markus** [FI/FI]; Varsitie 13 C 12, FIN-70150 Kuopio (FI). **POSO, Antti** [FI/FI]; Vehnäkuja 3, FIN-76150 Pieksämäki (FI). **CHRISTIAANS, Johannes** [NL/NL]; Zevenwouden 233, NL-3524 CR Utrecht (NL). **VENÄLÄINEN, Jarkko** [FI/FI]; Taivaanpankontie 17 B 15, FIN-70200 Kuopio (FI). **VEPSÄLÄINEN, Jouko** [FI/FI]; Korpitie 24,

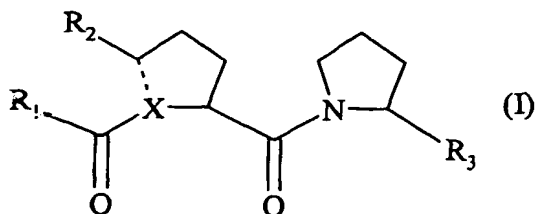
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOUNDS HAVING PROLYL OLIGOPEPTIDASE INHIBITORY ACTIVITY

(57) Abstract: The invention provides a compound of formula (I), wherein in the formula X, R₁, R₂ and R₃ are as defined in claim 1, or a pharmaceutically acceptable salt or ester thereof, useful as a prolyl oligopeptidase inhibitor. The compounds of formula (I) can be used for the treatment of diseases or conditions where prolyl oligopeptidase inhibitors are indicated to be effective, for example for the treatment of neurodegenerative diseases, such as Alzheimer's disease and senile dementia

WO 2004/060862 A2